



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,704	11/18/2003	Thomas Voss	ZAHFRI P572US	5407
20210	7590	10/22/2004	EXAMINER	
DAVIS & BUJOLD, P.L.L.C. FOURTH FLOOR 500 N. COMMERCIAL STREET MANCHESTER, NH 03101-1151			MAYO III, WILLIAM H	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 10/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/715,704	VOSS ET AL. <i>[Signature]</i>	
	<b>Examiner</b>	<b>Art Unit</b>	2831
	William H. Mayo III		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 12 August 2004.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 8-26 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 8-26 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 26 August 2004 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \*    c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings were received on August 12, 2004. These drawings are approved.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 8-12, 14-15, 17-23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai et al (Pat Num 4,476,192, herein referred to as

Imai) in view of Imai et al (Pat Num 4,439,255, herein referred to as Imai2). Imai discloses an insulated coil capable of being utilized for wires of an electrical engine of motor vehicles (Col 1, lines 25-30), wherein the insulating coil has great resistance to overload and which is not easily shorted even if an overcurrent flows into the motor coils (Col 1, lines 5-11). Specifically, with respect to claim 8, Imai discloses that the insulated coil contains a wire, wherein the wire consists of a single layer of insulating material (silicone resin having embedded inorganic filler materials), wherein the insulating materials (silicone resin having embedded inorganic filler materials, Col 2, lines 22-32) permit operation at high temperatures (Col 1, lines 25-30). With respect to claim 9, Imai discloses the insulating materials (silicone resin having embedded inorganic filler materials) serve as spacers (i.e. when the wire is wound as a coil the insulating materials act as spacers between the turns of the coil) and inherently protect against contact such that no flashover danger exist in the case of low voltages (Col 2, lines 28-32). With respect to claim 11, Imai discloses that the wire may have an insulating material (silicone resin having embedded inorganic materials) wherein the insulating layer may be made of a ceramic elastic thin layer (i.e. silicone embedded with titanium dioxide, Col 2, lines 50-56). With respect to claim 12, Imai discloses an insulated coil capable of being utilized for wires of an electrical engine of motor vehicles (Col 1, lines 25-30). With respect to claim 15, Imai discloses that the insulating coil may be incorporated into an electrical magnet of motor vehicles (Col 1, lines 25-30). With respect to claim 18, Imai discloses that the wire may comprise an insulating layer having white mica

powder thereby forming a white wire (Col 7, lines 60-63). With respect to claim 19, Imai discloses the insulating materials (silicone resin having embedded inorganic filler materials) serve as spacers (i.e. when the wire is wound as a coil the insulating materials act as spacers between the turns of the coil) and inherently protect against contact such that no flashover danger exist in the case of low voltages (Col 2, lines 28-32). With respect to claim 20, Imai discloses the insulating materials (silicone resin having embedded inorganic filler materials) serve as spacers (i.e. when the wire is wound as a coil the insulating materials act as spacers between the turns of the coil) and inherently protect against contact such that no flashover danger exist in the case of low voltages (Col 2, lines 28-32). With respect to claim 21, Imai discloses that the wire may have an insulating material (silicone resin having embedded inorganic materials) wherein the insulating layer may be made of a ceramic elastic thin layer (i.e. silicone embedded with titanium dioxide, Col 2, lines 50-56). With respect to claim 23, Imai discloses an insulated coil capable of being utilized for wires of an electrical engine of motor vehicles (Col 1, lines 25-30).

However, Imai doesn't necessarily disclose the insulating material permitting operation of the wire at temperatures above 200°C (claims 8 & 19), nor the insulating material being a glass filament (claims 10 & 22), nor the wire being permitting operation of the wire at temperatures between 290-300°C in engines and magnets (claims 14, 17, & 25).

Imai2 teaches an insulated coil (Figs 1-5) capable of being utilized for wires of an electrical engine of motor vehicles (Col 2, lines 20-22), wherein the

insulated wire has excellent heat resistant and superior durability suitable for use as a structural component in magnet motors (Col 1, lines 21-28). Specifically, with respect to claims 8 & 19, Imai2 teaches that the insulated coil (Fig 1) containing a wire (10), wherein the wire (10) consists of an insulating material (16), wherein the insulating material (16) permit operation at temperatures above 200°C (Col 2, lines 5-12). With respect to claims 10 & 22, Imai teaches that the insulating material (16) may be made of glass filaments (Col 1, lines 51-66). With respect to claims 14, 17, & 25, Imai2 teaches that the insulated coil (Fig 1) containing a wire (10), wherein the wire (10) consists of an insulating material (16), wherein the insulating material (16) permit operation at temperatures 290-300°C in engines and magnets (Col 2, lines 5-12).

With respect to claims 8, 14, 17, 19, & 25, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the single insulated layer of Imai to comprise the glass filament layer configuration as taught by Imai2 because Imai2 teaches that such a configuration provides a insulated wire having has excellent heat resistant and superior durability suitable for use as a structural component in magnet motors (Col 1, lines 21-28).

5. Claims 13, 16, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai (Pat Num 4,476,192) in view Imai2 (Pat Num 4,439,255) as applied to claims 8 & 19 (herein referred to as modified Imai), further in view of Tridelta (DE Pat Num 44 07 781 A1). Modified Imai discloses an insulated coil

(Figs 1-5) capable of being utilized for wires of an electrical engine of motor vehicles (Col 2, lines 20-22), as disclosed above with respect to claim 8 & 12.

However, modified Imai doesn't specifically disclose the electrical engine further comprising a housing and an axis consisting of at least one of a thermally insulating ceramic or plastic (claims 13, 16, & 24).

Tridelta teaches a small high precision instrument (Figs 1-3) for machine modules for mounting of components, such as rotary bearings having superior electrical and thermal insulating properties, wherein the housing is combined in one piece of recyclable parts (abstract). Specifically, with respect to claims 13, 16, & 24, Tridelta teaches a housing (1) that may be utilized with coils of an electrical engine wherein the housing (1) has an axis (center), and wherein the housing (1) may consist of thermally insulating plastic (i.e. silicates, abstract).

With respect to claims 13, 16, & 24, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the insulated coil of modified Imai to comprise the housing configuration as taught by Tridelta because Tridelta teaches that such a small high precision is commonly utilized for machine modules and mounting of components, such as rotary bearings and has superior electrical and thermal insulating properties, wherein the housing is combined in one piece of recyclable parts (abstract).

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Imai (Pat Num 4,476,192) in view Imai2 (Pat Num 4,439,255) and Tridelta (DE Pat Num 44 07 781 A1). Imai discloses an insulated coil capable of being utilized for wires of an electrical engine of motor vehicles (Col 1, lines 25-30),

wherein the insulating coil has great resistance to overload and which is not easily shorted even if an overcurrent flows into the motor coils (Col 1, lines 5-11). Specifically, with respect to claim 26, Imai discloses that the insulated coil contains a wire, wherein the wire consists of a single layer of insulating material (silicone resin having embedded inorganic filler materials), wherein the insulating materials (silicone resin having embedded inorganic filler materials, Col 2, lines 22-32) permit operation at high temperatures (Col 1, lines 25-30).

However, Imai doesn't necessarily disclose the insulating material permitting operation of the wire at temperatures above 200°C, nor the insulating material being a glass filament (claim 26).

Imai2 teaches an insulated coil (Figs 1-5) capable of being utilized for wires of an electrical engine of motor vehicles (Col 2, lines 20-22), wherein the insulated wire has excellent heat resistant and superior durability suitable for use as a structural component in magnet motors (Col 1, lines 21-28). Specifically, with respect to claim 26, Imai2 teaches that the insulated coil (Fig 1) containing a wire (10), wherein the wire (10) consists of an insulating material (16), wherein the insulating material (16) permit operation at temperatures above 200°C (Col 2, lines 5-12), wherein the insulating material (16) may be made of glass filaments (Col 1, lines 51-66).

With respect to claim 26, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the single insulated layer of Imai to comprise the glass filament layer configuration as taught by Imai2 because Imai2 teaches that such a configuration provides a

insulated wire having has excellent heat resistant and superior durability suitable for use as a structural component in magnet motors (Col 1, lines 21-28).

Modified Imai doesn't specifically disclose the electrical engine further comprising a housing and an axis consisting of at least one of a thermally insulating ceramic or plastic (claim 26).

Tridelta teaches a small high precision instrument (Figs 1-3) for machine modules for mounting of components, such as rotary bearings having superior electrical and thermal insulating properties, wherein the housing is combined in one piece of recyclable parts (abstract). Specifically, with respect to claim 26, Tridelta teaches a housing (1) that may be utilized with coils of an electrical engine wherein the housing (1) has an axis (center), and wherein the housing (1) may consist of thermally insulating plastic (i.e. silicates, abstract).

With respect to claim 26, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the insulated coil of modified Imai to comprise the housing configuration as taught by Tridelta because Tridelta teaches that such a small high precision is commonly utilized for machine modules and mounting of components, such as rotary bearings and has superior electrical and thermal insulating properties, wherein the housing is combined in one piece of recyclable parts (abstract).

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 8-26 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Usuki et al (Pat Num 4,342,814) and Tachikawa et al (Pat Num 5,425,992), both of which disclose insulating coils.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Communication***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

William H. Mayo III  
Primary Examiner  
Art Unit 2831



WHM III  
October 13, 2004